AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1 - 5. (Cancelled)

6. (Currently amended) ~~The system of claim 1,~~ A torque request generation system for use with a coordinated torque control system of a vehicle, comprising:

an input receiving a vehicle speed and an axle torque command;

a datastore recording a three-dimensional torque surface defined by a coordinate system having a first axis related to the axle torque command, a second axis related to the vehicle speed, and a third axis related to an axle torque request; and

a torque request generation module accessing said datastore and generating a torque request based on a correlation between the axle torque command and the vehicle speed respective of the three-dimensional torque surface, wherein said torque request generation module compares the vehicle speed to a creep speed threshold of the three-dimensional torque surface, and selectively ~~determines whether to calculate~~ calculates one of a coast down region torque request ~~versus~~ and a creep region torque request based on whether the vehicle speed exceeds the creep speed threshold.

7. (Currently amended) The system of claim 6, wherein calculating said coast down region torque request includes said torque request generation module ~~computes~~ computing a pedal breakpoint based on the vehicle speed respective of a pedal breakpoint curve residing in a plane formed by the first and second axes,

~~compares the~~ comparing a pedal command to the pedal breakpoint, and selectively ~~determines~~ determining whether to calculate a negative coast down region torque request versus a positive coast down region torque request based on whether the pedal command exceeds the pedal breakpoint.

8. (Previously presented) The system of claim 7, wherein said torque request generation module normalizes the pedal command based on the pedal breakpoint, adjusts the vehicle speed based on the creep speed threshold, computes a normalized positive torque based on a normalized pedal command and an adjusted vehicle speed, and multiplies an adjusted nominal maximum axle torque by the normalized positive torque, thereby producing the positive coast down region torque request.

9. (Previously presented) The system of claim 7, wherein said torque request generation module normalizes the pedal command based on the pedal breakpoint, multiplies a normalized pedal command by a negative real-time coast down torque, thereby producing a delta torque based on the real-time coast down torque, and adds a positive real-time coast down torque to the delta torque, thereby producing the negative coast down torque request.

10. (Currently amended) The system of claim 6, wherein calculating said creep region torque request includes said torque request generation module ~~normalizes~~ normalizing the vehicle speed based on the creep speed threshold, ~~computes~~ computing a normalized creep region torque based on a normalized vehicle speed and ~~the~~ a pedal command, ~~subtracts~~ subtracting a real-time coast down torque from an adjusted nominal maximum axle torque, thereby producing an axle torque range, and

~~multiplies~~ multiplying the normalized creep torque by the axle torque range, thereby producing a de-normalized creep region torque.

11. (Currently amended) ~~The system of claim 1, further comprising~~ A torque request generation system for use with a coordinated torque control system of a vehicle, comprising:

an input receiving a vehicle speed and an axle torque command;

a datastore recording a three-dimensional torque surface defined by a coordinate system having a first axis related to the axle torque command, a second axis related to the vehicle speed, and a third axis related to an axle torque request;

a torque request generation module accessing said datastore and generating a torque request based on a correlation between the axle torque command and the vehicle speed respective of the three-dimensional torque surface; and

a torque request elevation module that compares [[the]] a pedal command to a predetermined threshold, and elevates the torque request above a nominal maximum achievable torque as a function of an amount by which the pedal command exceeds the predetermined threshold relative to an upper range of pedal command.

12. (Original) The system of claim 11, wherein an upper range of elevation accounts for statistical variability between vehicle engine capabilities relating to maximum achievable torque.

13 - 16. (Cancelled)

17. (Currently amended) ~~The method of claim 13, further comprising:~~ A torque request generation method for use with a coordinated torque control system of a vehicle, comprising:

receiving an axle torque command from a driver input device;

receiving input indicating vehicle speed;

generating a torque request based on a correlation between the axle torque command and the vehicle speed respective of a three-dimensional torque surface residing in processor memory and defined in terms of a coordinate system having a first axis related to the axle torque command, a second axis related to the vehicle speed, and a third axis related to the axle torque request;

comparing the vehicle speed to a creep speed threshold of the three-dimensional torque surface; and

~~selectively determining whether to calculate~~ calculating one of a coast down region torque request ~~versus~~ and a creep region torque request based on whether the vehicle speed exceeds the creep speed threshold.

18. (Currently amended) The method of claim 17~~, further comprising:~~ wherein calculating the coast down region torque request includes:

computing a pedal breakpoint based on the vehicle speed respective of a pedal breakpoint curve residing in a plane formed by the first and second axes;

comparing [[the]] a pedal command to the pedal breakpoint; and

selectively determining whether to calculate a negative coast down region torque request versus a positive coast down region torque request based on whether the pedal command exceeds the pedal breakpoint.

19. (Original) The method of claim 18, further comprising:

normalizing the pedal command based on the pedal breakpoint;

adjusting the vehicle speed based on the creep speed threshold;

computing a normalized positive torque based on a normalized pedal command and an adjusted vehicle speed; and

multiplying an adjusted nominal maximum axle torque by the normalized positive torque, thereby producing the positive coast down region torque request.

20. (Original) The method of claim 18, further comprising:

normalizing the pedal command based on the pedal breakpoint;

multiplying a normalized pedal command by a negative real-time coast down torque, thereby producing a delta torque based on the real-time coast down torque; and

adding a positive real-time coast down torque to the delta torque, thereby producing the negative coast down region torque request.

21. (Currently amended) The method of claim 17~~, further comprising:~~ wherein calculating the creep region torque request includes:

normalizing the vehicle speed based on the creep speed threshold;

computing a normalized creep torque based on a normalized vehicle speed and the pedal command;

subtracting a real-time coast down torque from an adjusted nominal maximum axle torque, thereby producing an axle torque range; and

multiplying the normalized creep torque by the axle torque range, thereby producing a de-normalized creep region torque.

22. (Currently amended) ~~The method of claim 13, further comprising:~~ A torque request generation method for use with a coordinated torque control system of a vehicle, comprising:

receiving an axle torque command from a driver input device;

receiving input indicating vehicle speed;

generating a torque request based on a correlation between the axle torque command and the vehicle speed respective of a three-dimensional torque surface residing in processor memory and defined in terms of a coordinate system having a first axis related to the axle torque command, a second axis related to the vehicle speed, and a third axis related to the axle torque request;

comparing [[the]] a pedal command to a predetermined threshold; and

elevating the torque request above a nominal maximum achievable torque as a function of an amount by which the pedal command exceeds the predetermined threshold relative to an upper range of pedal command.

23. (Original) The method of claim 22, further comprising statistically determining an upper range of elevation based on variability between vehicle engine capabilities relating to maximum achievable torque.